

## **REMARKS**

Applicants submit these remarks in response to the Office Action dated May 4, 2004 ("Office Action"). The undersigned is grateful for the Examiner's assistance on August 3, 2004.

### **Specification**

Amendments to the Specification reflect the change in status of U.S. Patent Application No. 09/073,845, filed May 7, 1998, which issued as U.S. Patent No. 6,453,246 on September 17, 2002..

### **Claims**

Claims 1-33 and 36 are pending in the application.

#### ***The Rejection of Claims 1-33 and 36 under 35 U.S.C. § 112 Second Paragraph***

Claims 1, 14, 24, and all dependent claims therefrom, are rejected as being indefinite due to the placement of the phrase "wherein the distances between the coordinates represent relationships between the products" for claim 1 and the phrase "wherein the distances between the coordinates represent similarity/dissimilarity of the products" for claims 14 and 24. Office Action at p. 3. The Examiner asserts that "it is unclear whether the preamble is intended to be part of the body of the claim." This rejection is obviated by amending the claim to recite the phrase "wherein the distances between the coordinates represent relationships between the products" for claim 1 and the phrase "wherein the distances between the coordinates represent similarity/dissimilarity of the products" for claims 14 and 24, within the body of those claims to more clearly define Applicants invention. Support for this amendment may be found throughout the specification, for example, at pp. 8-9 ¶ 19.

Claims 1, 14, 24, and all dependent claims therefrom, are rejected for the recitation of the term "useful." Office Action at p. 3. This rejection is obviated by amending the claim to recite "used to" which more clearly states the relationship between the mapping function  $f$  which is used to generate coordinates corresponding to additional products. The mapping function  $f$  is used to determine and generate mapping coordinates of other products. Support for this amendment may be found throughout the specification, *e.g.*, at pp.7-8 ¶ 15.

Claims 4, 16 and 26 are rejected as being vague and indefinite for the recitation of the phrase “more representative.” Office Action at p. 4. The Examiner is unclear how “more representative” can measure a relationship between the products when a criteria by which to compare has not been established. This rejection is obviated by amending the claim to recite the step of “... determining the relationship between the two products” and “refining the initial set of mapping coordinates . . . based on the relationship and the corresponding distance between the products.” Support for this amendment may be found throughout the specification, *e.g.*, at pp. 8-9 ¶19.

Claims 4, 16 and 26 are rejected as being vague and indefinite for the recitation of the phrase “a stop criterion is obtained.” Office Action at p. 4. This rejection is obviated by removal of that phrase. Support for this amendment may be found throughout the specification, *e.g.* at pp. 14-15 ¶50.

Claims 10, 11, 20, 21, 30 and 31 are rejected as being vague and indefinite for the recitation of the phrase “fragment of reagents” in claims 10, 20 and 30 and the phrase “modified fragments of reagents” for claims 11, 21 and 31. Office Action at p. 5. The Examiner is unclear with regards to the interpretations of the term “fragment.” This rejection is obviated by amending the claim to recite “chemical fragments” to better define that the fragments of reagents are structural fragments. Support for this amendment may be found throughout the specification, *e.g.*, at pp. 4-5 ¶9.

Claims 13, 23 and 33 are rejected as being vague and indefinite for the recitation of the phrase “a set of specialized mapping functions  $f_1$  through  $f_n$ .” Office Action at p. 5. The Examiner is unclear of the criteria of what makes a mapping function “specialized.” This rejection is obviated by removal of the word “specialized.” The specification defines mapping functions  $f_1$  through  $f_n$  as different sets of products and their mapping coordinates with which the neural nets are trained. Support for this amendment may be found throughout the specification, *e.g.*, at p.13 ¶42.

Claim 36 is rejected as being vague and indefinite for the recitation of the phrase “until the distances between the products on the m-dimensional nonlinear map are representative of the similarity relationship between the products.” Office Action at p. 5. The Examiner is unclear at what point a relationship can be ‘representative.’ This rejection is obviated by removal of the phrase. Support for this amendment may be found throughout the specification, *e.g.*, at pp. 14-15 ¶50.

***The Rejection of Claims 1-3, 5-9, 12, 14, 15, 17-19, 22, 24, 25, 27-29, and 32 under 35 U.S.C. § 102 (a)***

The Examiner has rejected claims 1-3, 5-9, 12, 14, 15, 17-19, 22, 24, 25, 27-29 and 32 under 35 U.S.C. § 102 (a) as being anticipated by Agrafiotis *et al.* (Nonlinear Mapping Networks, *J. Chem. Inf. Comput. Sci.* Nov.-Dec. 2000, Vol. 40, p. 1356-1362). Applicants respectfully traverse this rejection.

The instant application is a continuation-in-part of U.S. Application No. 09/934,084 ('084), filed August 22, 2001, which is incorporated by reference into the instant application. '084 claims priority to U.S. Provisional Application Nos. 60/264,258, filed January 29, 2001, and 60/274,238, filed March 9, 2001. '084 teaches the use of a mapping function which is used to generate data for a training set. '084 also describes the use of a supervised machine learning approach, such as a neural network, which uses the training set to transform input from the products to a corresponding value, *see e.g.*, '084 at p. 4, ¶11. Additionally, '084 and the instant application each use the techniques describe above to scale down large data sets such as a combinatorial library. *See, e.g.*, '084 at p.1, ¶ 4 and the instant application at p.1, ¶ 2.

35 U.S.C. § 102 states, in part:

A person shall be entitled to a patent unless –

(a) the invention was known or use by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent

However, as noted in M.P.E.P. § 2132.01:

If the reference is disclosing applicant's own work as derived from him or her, applicant may submit either a 37 CFR 1.131 affidavit to antedate the reference or a 37 CFR 1.132 affidavit to show derivation of the reference subject matter from applicant and invention by applicant.

By way of a declaration under 37 C.F.R. § 1.132, submitted herewith, Applicants have demonstrated that: (1) Agrafiotis *et al.* was published less than one year before the priority date of the pending application; (2) Agrafiotis *et al.* discloses parts of Applicants own invention; and (3) Each inventor

named in the pending application contributed, in whole or in part, to the subject matter defined in at least one claim in the pending application. For these reasons, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(a).

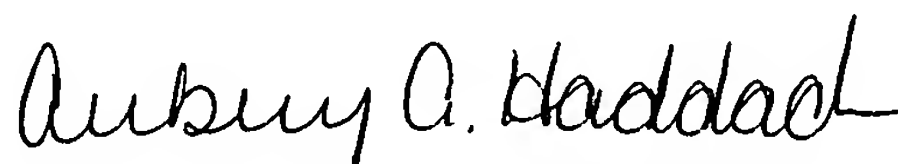
### **CONCLUSION**

Applicants believe that for the reasons set forth above, claims 1-33 and 36 are in condition for allowance and respectfully request prompt and favorable action. The shortened statutory period for reply expires on August 4, 2004, therefore Applicants believe this response is timely filed and no additional fee is due. However, in the event that any additional fees are required for the filing of this response, please charge such fees to Deposit Account No. 23-2415.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (858) 350-2319.

Respectfully submitted,

WILSON SONSINI GOODRICH & ROSATI  
Professional Corporation



Aubrey A. Haddach, Agent for Applicant  
Registration No. 48,374

Dated August 4, 2004



WSGR No. 30923-409.501

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Patent Application of: Applicant: Agraftotis <i>et al.</i> Serial No.: 10/058,216 Filed: January 29, 2002 Title: <i>Method, System and Computer Program Product for Analyzing Combinatorial Libraries</i>	Group Art Unit: 1631 Examiner: Channing S. Mahatan  <u>Certificate of Mailing Under C.F.R. §1.8</u> I hereby certify that this correspondence and all marked attachments are being deposited by Express Mail, Express Mailing Label No.: EV 334638413 US on 4-Aug-04 addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. By: <u>Amy A. Bathke</u> Amy Bathke
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**DECLARATION UNDER 37 C.F.R. § 1.132**

MAIL STOP AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, Dimitris K. Agraftotis, hereby declare, based on information and belief:

1. I am named as an inventor in the above-identified application.
2. I have read the original claims as filed and the amended claims attached as Exhibit 1, which I understand are being submitted as part of an Amendment and Response to Office Action.
3. I am one of two authors of the article "Nonlinear Mapping Networks", *J. Chem. Informatics Comp. Sci.*, Nov.-Dec. 2000, Vol. 40, p. 1356-1362 ("Nonlinear Mapping Networks"). The second author, Victor S. Lovanov, is also named as an inventor in the above-identified application.
4. Nonlinearly Mapping Networks was not published before August 22, 2000.
5. I and the other two named inventors, Victor S. Lovanov and F. Raymond Salemme, contributed, in whole or in part, to the subject matter defined in at least one claim in the application as filed and presented in Exhibit 1.

I, Dimitris K. Agrafiotis, further declare that all statements made herein are true to the best of my knowledge, or if made upon information and belief, are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

D. Agrafiotis  
Dimitris K. Agrafiotis

8-4-2004  
Dated